

LXXXIII.—*The Systematic Position of the Genus*
Hadrotarsus, Thorell. By R. I. POCKOCK.

THE type of the genus *Gmogala*, Keys., namely *G. scarabæus*, Keys., from Sydney, is in the British Museum. It was described in 1890 in the last part of L. Koch's work on the spiders of Australia. The description is defective in many points, erroneous in others. Hence I offer the following supplementary remarks on this interesting little genus*.

Simon (Hist. Nat. Araignées, i. pp. 305–307, 1892) rightly surmised that the type of *Gmogala* was related to that of *Hadrotarsus*, Thor. On the strength of Keyserling's description of *Gmogala scarabæus* he kept the two genera distinct, but united them in the family Hadrotarsidæ. In my opinion there is no doubt that the two genera are identical.

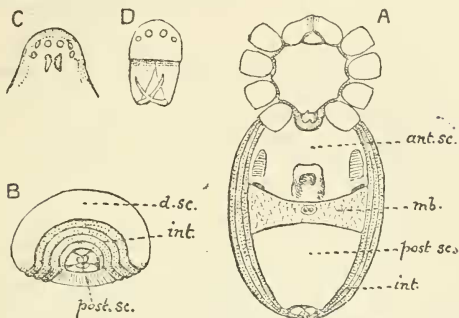
In *Gmogala scarabæus*, as in *Hadrotarsus babirussa*, the eyes of the anterior line are procurved, the medians being considerably larger than the laterals. Keyserling erroneously describes the anterior eye-line as recurved, with the medians smaller than the laterals. His figure and description of those of the posterior line are approximately correct. The clypeus is high and its inferior edge overhangs the base of the mandibles. The latter are vertical, not convex in front, with their inner edges obliquely diverging externally from near the base; the fangs are long, arcuate, lying transversely and crossing each other in the middle line. The labium is triangular, wider than long. The maxillæ are oblique and meet in front of the labium, their inner extremities being membranous and pellucid. This pellucid area was apparently overlooked by Keyserling, who represents the maxillæ as widely separated in the middle line. The sternum is very wide and convex, and projects between the posterior coxæ, which are widely separated. The metasternite is thickly chitinized and relatively large. Similarly the dorsal sclerite of the pedicle is thickly chitinized. The anterior extremity of the abdomen forms a circular rim above and below the pedicle. The dorsal scute does not extend to the posterior end of the abdomen, four transversely arched integumental folds intervening between it and the anal tubercle. These folds are continuous with the longitudinal folds that run along the sides of the abdomen between the dorsal and

* Having only one specimen for examination I was unable to determine certain important structural features, notably the dentition of the mandibles, the structure of the sclerites of the pedicle, &c.

ventral sclerites. The ventral sclerites are two in number and subequal in length; they are separated from each other by a transverse band of thick membrane. The anterior sclerite extends forwards to the pedicle. In front of its posterior border in the middle line is the very distinct epigyne; the lung-sacs lie at its sides, their spiracles being upon its postero-lateral angles. The tracheal spiracles are situated in the middle of the membranous band; they appear as a pair of contiguous round dark spots, surrounded by a circular rim. The posterior plate is narrowed behind and extends back to the spinners. The four visible spinners form with the anal tubercle a compact cluster at the extreme posterior end of the abdomen.

Simon placed the Hadrotarsidæ provisionally between the Oonopidæ and Dysderidæ, but the well-developed epigyne serves to separate them entirely from the neighbourhood of these families and to place them amongst the ecribellate entelegynous forms. Simon also points out that they have "des rapports très sérieux" with certain Theridiidæ, notably with *Pholcomma*, but more especially with *Paculla* and *Tetrablemma*. *Hadrotarsus* has the high clypeus, the conical cluster of spinners, &c. of the Theridiidæ, the broad sternum, triangular labium, obliquely inclined maxillæ, strong attenuate mandibles with long slender arched fangs, and the long tarsi described by Simon as typical of the Pacullæ (*loc. cit.* p. 570). Moreover, the irregular shape and general appearance of the posterior median eyes in *Hadrotarsus* suggest that these organs are in process of atrophy. Were the obliteration to be completed, the remaining six eyes would not differ greatly from the six eyes of *Paculla*. As for the abdomen, in the presence of the large dorsal scute, of the lateral and posterior integumental folds, and of the ventral scutes it is almost identical with that described and figured by Simon as seen in *Tetrablemma* (*loc. cit.* p. 3, fig. 5, and p. 571, fig. 584), except that the integumental folds are not strengthened with chitinous bands (erroneously compared by Simon with the tergal plates of *Liphistius*), and the posterior ventral plate is relatively larger and undivided. Simon was not able to determine with certainty the position of the spiracles in *Tetrablemma* and *Paculla*, but supposed them to open upon the posterior border of the anterior ventral scute, where they are placed, in fact, in *Hadrotarsus*. Cambridge, however, described the spiracles in *Tetrablemma* as situated close together towards the middle of the ventral surface behind the anterior scute (*P. Z. S.* 1873, pl. xii. fig. 1 c, p. 115). However that may

be, the known facts justify, in my opinion, the union of *Hadrotarsus* with the *Paculleæ*.



Hadrotarsus scarabæus (Keys.).

- A. Ventral view of trunk, showing the anterior scute (*ant.sc.*) of the abdomen, with the epigyne and lung-sacs, the membranous band (*mb.*) with the approximated median tracheal spiracles, the posterior scute (*post.sc.*), and the lateral integumental folds (*int.*).
- B. Posterior extremity of abdomen from behind, showing the dorsal scute (*d.sc.*), the integumental folds (*int.*), and the posterior ventral scute (*post.sc.*) with the cluster of spinners and the anal tubercle above it.
- C. Anterior end of carapace from above, showing the eyes.
- D. Face, showing eyes of anterior line, high clypeus, and mandibles with long crossing fangs.

LXXXIV.—*A new Clasping-organ in a Centipede.*

By R. I. POCCOCK.

THE African and Oriental Scolopendroid genus *Otostigmus* is represented in the Neotropical Region by a series of species for which I have proposed the name *Parotostigmus*. In certain species of this genus the males are furnished with a pair of movable processes, varying in shape according to the species and arising one on each side from the inner surface of the femur of the legs of the posterior pair. The first species to be described with this peculiarity was *P. scabri-cauda*, Sauss., from Rio Janeiro. In 1879 Kohlrausch recorded *P. scabri-cauda* from Popayan in Colombia, and, following him, I referred to this species specimens from